

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004076**Date Inspected:** 25-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** Sha Zhi/Wu Ming Kai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/ Tower**Summary of Items Observed:****Strut Mock-up Bay 4**

This QA Inspector was observed ZPMC starting the pre-heat for web plate MA26 on the strut mock up. Electric heaters were placed on both side of the web plate to achieve the minimum temperature of 140°C. The actual temperature reached was 164°C prior to welding at the 60mm thick plate. The web plate is a transition CJP weld splice from 28mm to 60mm plate. The root pass was placed with the SAW process in 2 sections due to the tack welds being long in length. Once the root pass was completed ZPMC personnel used a 150mm electric grinder to clean the root pass. ZPMC and ABF personnel examined the area and found it to be acceptable to proceed with the intermediate weld passes. ZPMC placed 3 intermediate weld passes to insure enough weld metal for the back gouge and also for the distortion control. This QA Inspector was informed by ZPMC's CWI's Sha Zhi and Wu Ming Kai that they would turn the plate over and perform the back gouge operations (this will probably take place tomorrow on day shift due to being at the end of the shift today). The welding procedure specification utilized for this procedure was WPS-B-T-4221-B-U3c-S-1 with welding operator for the SAW process being Jiang Jingteng – 046830. Welding parameters were taken during the intermediate passes as Amps - 601, Volts – 28.8, Travel speed – 487 mm/min and a calculated heat input of 2.13 KJ/mm. This QA inspector spoke with CWI Sha Zhi on the importance of following the approved procedure for this mock up along with the distortion control plan to be followed. Noted on the components for the top/bottom and web plates for the strut mock-up was die stamps of the heat numbers in the steel for tractability of the 485 Gr. and 345 Gr. material. At this stage in the welding of the strut mock up it appears to be within the guidelines of the approved procedure.

OBG Bay 1

The Caltrans QA observed ZPMC has approximately thirty (30) to forty (40) workers performing various functions relative to the fabrication of the OBG Deck Panels. These functions include; closed rib milling, PJP

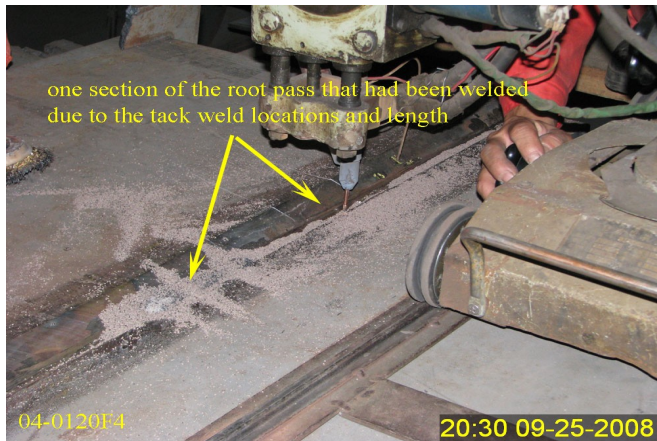
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weld joint beveling, drilling thru holes, press forming, closed rib splice welding, closed rib diaphragm fit-up and FCAW welding of splices, closed rib to deck plate fit-up and tack welding and the PJP welding of closed ribs to deck plates. Deck Plates at the gantry stations were, Gantry-1 DP227-001 tack welded, ZPMC had not performed MT for the tack weld locations at the time of Caltrans QA's observation. DP146-001 had SAW and GMAW completed previously. Gantry 2, DP 335-001 and DP335-002 had been completed and sitting at this station for approximately 72 hours. No welding of deck panels was observed in this bay for swing shift to include the tack welding table which appeared idle.

OBG Bay 3

This Caltrans QA observed ZPMC continuing with the fabrication of various Side, Bottom and Edge Panels designated for the SAS OBG. The general fabrication of said items consist of removing of coating from weld joint areas, cutting, splitting of "W" shape beams for "T" stiffeners, splicing of plates, fitting, tack welding and welding. Various T stiffeners were in the beginning stage of being spliced a total of 14 were observed from fit-up to welding in process. Also noted was side plates SP153 and SP366 was in process of being fit and tack welded together for the WT stiffeners to the flat plate.



Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Ady Velasco , 1-381-694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Riley, Ken	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer
